Doctor Burky's synergic immunity has been studied in greater detail by Doctors Swift and Schultz[8] of the Rockefeller Institute. The New York investigators found that the synergic effect of staphylococcus toxin could be demonstrated without mixing nonantigenic proteins with the toxin. Protein and toxin could be injected separately into different veins, or into the same vein with several hours' interval between injections, and still lead to the production of high-titer antiprotein precipitins. To explain this synergic effect, they postulate that the intravenously injected toxin exerts a stimulating action on the antibody-producing tissues, a "synergic conditioning" of the specific immunity mechanism. A somewhat more complex theory is proposed by Picado,[9] who has studied a wide range of other synergic phenomena. According to his theory the increased antibody titer caused by intravenously injected toxin is not due to a stimulation of normal antibody production, but to a chemical perversion or transformation ("deviation hiérarcique") of preëxisting humoral factor. His synergic antibodies, therefore, are abnormal serological products of questionable clinical value.

The synergic phenomena of greatest theoretical interest at the present time, however, is the conceived possibility of stimulating the production of natural antibody by intravenous injections with certain normal tissue stimulants or activities, such as vitamins and hormones. Encouraging results have been reported. Jusatz,[10] for example, alleges that if 100 milligrams of cevitamic acid is injected intravenously into a rabbit, this natural vitamin will increase specific precipitin production tenfold. This vitamin is equally effective if mixed with routine vaccines (*e. g.*, horse protein). Doctors Steinbach and Klein[11] of Columbia University report that daily intravenous injections of pregnancy hormone ("antuitrin S") favors the development of an effective immunity in tuberculous rabbits. In their hands the severity of an experimental tuberculous infection is reduced fully two-thirds by this hormone. Complete cures, however, have not yet been reported by them.

Broadening of the field of vaccine therapy and serum therapy to include the adjuvant immunizing powers of vitamins and hormones, is conceivably the most promising advance in immunological technique of recent years. Unfortunately, it is almost inevitable that the new plausibilities thus suggested will be followed by commercial exploitation. Clinicians should remember in this connection the exploded plausibilities of "leukocytic extract" and "bacteriophage" therapy.

Box 51.

W. H. MANWARING,
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8 Swift, H. F., and Schultz, M. P.: J. Exp. Med., 63:703-725, 1936.

9 Picado, C.: Ann. Inst. Pasteur, 56:186, 1936.

10 Jusatz, H. L.: Ztschr. f. Immunitätsforsch., 88:472-483, 1936.

11 Steinbach, M. M., and Klein, S. J.: J. Exp. Med., 65:205, 1937.

CESAREAN SECTION

Why are so many cesarean sections being done? Is it because the indications for cesarean sections have changed? Are women different today from what they were one hundred years ago? Is there no mortality with laparotrachelotomy?

The answer is, no. The indications for cesarean section have not changed. Cesarean section should be performed for disproportion between fetus and pelvis; contracted pelvis, previous cesarean section and, in some instances, for placenta previae and toxemias. However, the number of cesarean sections that are being performed without proper indications is really appalling. Bell, in his survey of maternal mortality for the Bay County region, has shown that in some hospitals the incidence was as high as 17 per cent, and mortality rate in some instances 12 per cent.

Thus, we see that cesarean section certainly carries a mortality rate, and one should wait for proper indications before doing the same. Of course one will say that if you wait too long your case is infected and then your mortality rate goes up.

From statistical study and our own experience we find that the death rate increases one per cent with each hour in labor. These women die as a rule from wound infection, peritonitis, and hemorrhage. Thus, one sees that the ideal time to operate is early in labor, but only where indications are justifiable. The operation best suited is the low cervical cesarean section. The majority of cases of contracted pelvis fall into this category. But if we have cases that are potentially infected, in which a favorable outlook for mother and child seems hazardous by the vaginal or intraperitoneal route, then one should perform the extraperitoneal or Latzko cesarean. However, this operation is only indicated in patients that have been in labor a long time, and where the lower uterine segment is well developed. One, therefore, can give a patient a test of labor with impunity and, if necessity arises, do the Latzko operation.

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CARCINOMA OF THE LUNG

Primary carcinoma of the lung occurs more frequently than any of us suspect. This disease at present appears in one per cent of all autopsies and makes up eight per cent of all cancer. The fifth and sixth decades are most vulnerable, the average age being fifty-one. In general, men are affected more often than women, the ratio being about 3.5 : 1.

The usual symptoms of carcinoma of the lung are cough, loss of weight, pain in the chest, and hemoptysis. When the growth occurs in a major bronchus, atelectasis of the distal lung soon ensues, due to the blocking of the air passage by the tumor. Infection frequently occurs in the atelectatic lung,